IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No.:	10/604,703	Confirmation No.: 1702
Applicant :	Elder et al.	
Filed :	August 11, 2003	
Title :	Multiple Battery System and Auxiliary Battery Attachment System	
TC/A.U. :	2838	
Examiner :	Pia Florence Tibbits	
Docket No. :	013476-05187	

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DECLARATION OF WILLIAM J. WEISS UNDER 37 C.F.R. § 1.132

I, William J. Weiss, make this declaration on personal knowledge and declare as follows:

1. I am a practicing Electronic Engineer and am currently General Manager of Total Engineering Solutions, LLC of Deerfield Beach, Florida. I have been designing and overseeing the design of various analog and digital circuits for the past 13 years, including various control circuits. I received a T6 Degree in Electronic Engineering from Johannesburg Technical College, Johannesburg, South Africa in 1992. Based on my understanding, the T6 Degree in Electronic Engineering is equivalent to a Bachelor of Science in Electrical Engineering. Prior to joining Total Engineering Solutions, I was Vice President of Hedmor Inc. of Coral Springs, Florida.

2. I have read U.S. Patent Application Serial No. 10/604,703 (hereinafter "the '703 Application"), including the specification and drawings, and understand the contents thereof.

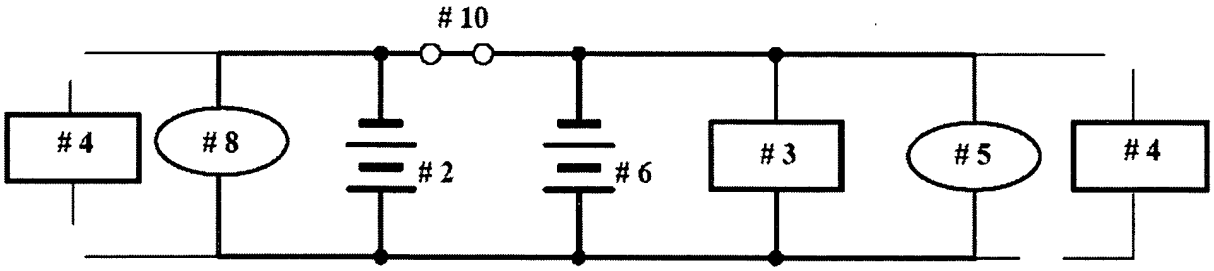
3. I have also read and understand the Final Office Action dated October 6, 2005 and all the references that have been cited by Applicants or the Examiner in connection with the '703 Application, including U.S. Patent No. 6,229,279 issued to Dierker (hereinafter "Dierker").

4. I have further read and understand new claims 88-105 as proposed by Applicants in their

Submission in Support of a Request for Continued Examination, to which this declaration provides support.

5. Based on my understanding, Dierker discloses several embodiments of a multiple battery system, as schematically illustrated in FIGs. 1-6 thereof. In each embodiment, the multiple battery system is described and depicted as having both a starting mode and one or more non-starting or normal operational modes. Notably, each depicted and disclosed embodiment of Dierker includes switches 7, 9, and 10 in the exact same locations. The operations and functions of switches 7, 9, and 10 during engine startup (i.e., when the ignition switch 7 is closed) is described exclusively in column 2, lines 45-60 of Dierker. Based on that disclosure, one of ordinary skill in the art would clearly understand that the crux of Dierker's startup operation in *all* disclosed embodiments is a parallel battery "boost" system, which is drastically different than the system and method recited in Applicants' claims 88-105.

6. The starting mode or operation for *all* embodiments disclosed in Dierker (FIGs. 1-6) simplifies to an identical electrical schematic of a basic parallel boost system as shown below in Schematic 1, which is presented here without discussion of the charge balancing between the starter battery 2 and the vehicle electrical system battery 6 and the MOSFETS and ancillary switches as are presented in FIGs. 3-6 of Dierker, but which have no effect on the startup operation.



Schematic 1

7. Each embodiment has several switches 7, 9, 10, 12, 13, 14 that are selectively closed at engine startup as summarized in the table below, with annotations to the appropriate line and

column numbers of Dierker indicating the position of each respective switch at startup. As evident from the schematic above and the table below, *both* the vehicle electrical system battery 6 and the starter battery 2 are connected in parallel and *simultaneously* supply DC power to the electrical system loads 3, 4, 5, 8 at engine startup, which is diametrically opposite to the recitations of Applicants' newly presented claims.

Figure	Switch Status	Col. and Line Citation
Fig. 1	7, 9, 10 closed	Col. 2, Lines 45-55
Fig. 2	7, 9, 10 closed	Col. 2, Lines 45-55
Fig. 3	7, 9, 10 closed, 12 no effect	Col. 2, Lines 45-55 Col. 3, Lines 28-42
Fig. 4	7, 9, 10 closed 13 or 14 closed	Col. 2, Lines 45-55 Col. 3, Lines 43 thru Col. 4, Line 15
Fig. 5	7, 9, 10 closed 13 or 14 no effect	Col. 2, Lines 45-55 Col. 4, Lines 16-25
Fig. 6	7, 9, 10 closed 13 or 14 closed	Col. 2, Lines 45-55 Col. 4, Lines 25-33

Table A – Switch Positions for Dierker's Starting Mode

8. Load 4 is shown twice in dashed form in Schematic 1 because load 4 is positioned at one of the two depicted locations at engine startup depending upon the particular embodiment. For example, load 4 is coupled to the vehicle electrical system battery 6 in the embodiments depicted in FIGs. 1, 3, and 4-6 and is coupled to the starter battery 2 in the embodiment depicted in FIG. 2.

9. In each starting scenario, the ignition switch 7 is closed, which in turn closes switch 9. Switch 9 is illustrated in FIGs. 1-6 as being controlled by switch 7. The closing of switches 7 and 9 causes the vehicle electrical system battery 6 and the starter battery 2 to be positioned in parallel with one another so as to supply power simultaneously to the starter 8 and the other electrical loads 3, 4, 5 of the system 1. In *all* embodiments disclosed in Dierker, switches 7, 9 and 10 close at startup to activate the starter 8, and only when the ignition switch 7 is engaged is a starting condition set. There is no alternative means disclosed or suggested by Dierker for setting and/or sourcing DC power during a starting condition.

10. Dierker's switching arrangement 7, 9, 10 is not operable in a first position (e.g., with switches 7, 9, and 10 open as during normal operation) to electrically connect the positive output of the vehicle electrical system battery 6 to the electrical system 3, 4, 5 *and* electrically disconnect the positive output of the starter battery 2 from the electrical system 3, 4, 5, and in a second position (e.g., will switches 7, 9, and 10 closed as during startup) to electrically connect the positive output of the starter battery 2 to the electrical system 3, 4, 5 *and* electrically disconnect the positive output of the vehicle electrical system battery 6 from the electrical system 3, 4, 5.

11. In no embodiment does Dierker disclose or suggest that the vehicle electrical system battery 6 and the starter battery 2 never supply electrical energy to the electrical system simultaneously. Instead, Dierker clearly discloses that both the vehicle electrical system battery 6 and the starter battery 2 *simultaneously* source DC power to the electrical system during startup.

12. For example, at column 2, lines 52-59, Dierker discloses that the closing of ignition switch 7 causes starter battery 2 and vehicle electrical system battery 6 to be connected *in parallel* and available for powering the primary load 4 and the starter 8.

13. By contrast, as recited in claims 88 and 104, the system of the present invention is specifically designed to provide an electrical system operated from a main battery as the *sole source* of DC power in a first switch position *or* from an at least one standby battery as a *sole source* of DC power in a second switch position, but *never* from both the main battery and at least one standby battery simultaneously.

14. For example, newly presented claim 88 positively recites a switching device operable in a first position to electrically connect the positive output of the main battery to the system positive terminal (i.e., the electrical system) and electrically disconnect the standby battery(ies) from the system positive terminal, thereby preventing the standby battery(ies) from supplying DC power to the electrical system during operation of the main battery. The claimed switching device is

further operable in a second position independent of the first position to electrically connect the positive output(s) of the standby battery(ies) to the system positive terminal and electrically disconnect the positive output of the main battery from the system positive terminal, thereby preventing the main battery from supplying DC power to the electrical system during operation of the standby battery(ies).

15. While independent claim 104 does not include the "positive output" and "positive terminal" terminology present in new claim 88, claim 104 clearly requires that the switching device be operable in a first position to permit electrical energy to flow out of the main battery to the electrical system and prevent electrical energy from flowing out of the at least one standby battery to the electrical system, and be further operable in a second position independent of the first position to permit electrical energy to flow out of the at least one standby battery to the electrical system and prevent electrical energy from flowing out of the main battery to the electrical system. Moreover, all three newly presented independent claims clearly recite that the main battery and the standby battery(ies) never supply electrical energy to the electrical system simultaneously.

16. Thus, whereas Dierker starts with a "boost" battery system in which a starter battery 2 is brought together in parallel with another battery 6 during starting operation, Applicants' claims clearly recite just the opposite (i.e., that the main battery and the standby battery(ies) *never supply electrical energy to the electrical system simultaneously*). Dierker expressly discloses his parallel connection requirement at column 2, lines 53-55. The variations between Dierker's embodiments of FIGs. 1-6 provide for different methods of powering the loads, specifically for powering load 4, after or before the start condition, *but not* at the start condition. As a result, Dierker does not and cannot provide for the positively recited elements of the newly presented claims and specifically teaches away from such aspects of the claims.

17. As a further distinction between Applicants' newly presented apparatus claims and the disclosure of Dierker, Dierker discloses a one-way charging circuit 11 (in FIGs. 1-3) or 13, 14 (in FIGs. 4-6), however, Dierker's charging circuit *does not* prevent current flow from the starter

battery 2 during the starting operation when the vehicle electrical system battery 6 is also operating (i.e., when switches 7, 9, and 10 are closed). Instead, Dierker's charging circuit 11 is bypassed by switch 10 during the starting operation and, therefore, cannot prevent current flow from the starter battery 2 during such operation. As a result, Dierker's charging circuit 11 does not prevent current flow from the starter battery at all times during which the main battery is supplying DC power to the electrical system.

18. By contrast, the apparatus claims of the present invention provide a one-way charging circuit configured to facilitate charging of and prevent current flow from the at least one standby battery *at all times* during which the main battery is supplying DC power to the electrical system. Applicants' invention provides a specific benefit in that the protection of the standby battery(ies) is present at *all* times the electrical system is sourced from the main battery. Such a recharging approach allows for a fully charged, fully functional standby battery to be available under all conditions during the operation of the electrical system in case of discharge or electrical fault of the main battery. This is a significant advantage over systems disclosed in Dierker, McDermott and Dougherty, as discussed in Applicants' specification at paragraphs 0008 and 0009.

19. As a further distinction between Applicants' newly presented claim 88 and the disclosure of Dierker, Dierker fails to provide for a switched connection to a single system positive terminal (depicted in Applicants' FIGs. 3B, 4B, and 5B as a single pole, multi-throw switch) by which only one of two or more positive battery outputs is electrically connected to the system positive terminal in such a way as to allow only one battery at a time to supply electrical energy to an electrical circuit.

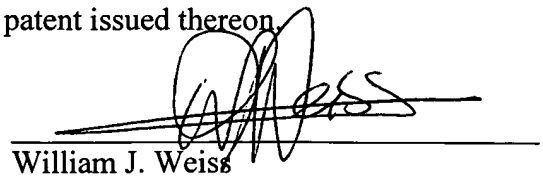
20. For example, in the switching position of Dierker in which switches 7, 9, and 10 are closed (i.e., at startup), both positive outputs of the batteries are electrically connected to the system positive terminal (i.e., the common positive node for the loads 3, 4, 5, 8 being sourced). On the other hand, in the switching position in which switches 7, 9, and 10 are open (i.e., during normal operation), the positive output of the vehicle electrical system battery 6 or the positive

output of the starter battery 2 is electrically connected to the system positive terminal (i.e., the common positive node for the loads being sourced 3, 4, 5).

21. In addition, in certain embodiments, Dierker even discloses use of two system positive terminals during normal operation. For instance, in FIG. 2, the positive output of starter battery 2 is electrically connected to the positive terminal of load 4 (one system positive terminal); whereas, the positive output of vehicle electrical system battery 6 is separately electrically connected to the positive terminal of parallel loads 3 and 5 (another system positive terminal) during normal operation. Therefore, Dierker does not and cannot provide the switching device and resultant switched electrical connections between the main and standby positive outputs positively recited in Applicants' claim 88.

22. In contrast to Dierker and the other references of record, Applicants' invention allows for at least one standby battery to be maintained in a fully charged state when a main battery is supplying DC power to an electrical circuit. In the event that the main battery is discharged for any reason (e.g., due to an improperly functioning alternator or otherwise), the standby battery can be immediately switched into operation to supply power to the electrical circuit without having to contend with the load of the discharged battery. The electrical system can then be fully operated by the standby battery until the main battery is repaired, replenished, or replaced.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the '703 Application or any patent issued thereon.



William J. Weiss

Date: 11/23/2005